

What is claimed is:

1. An ink feeding rate control method for adjusting ink feeding rates of a printing machine when performing a printing operation using printing plates with an image recorded thereon based on printing data, said method comprising:

10 a reference print preparing step for making a first printing plate by recording an image thereon based on first image data for recording a reference chart including a plurality of color patches set beforehand, and printing a reference print with said first printing plate;

15 a reference print color density measuring step for obtaining color data of said reference print by reading said reference print prepared in said reference print preparing step;

20 a conversion table creating step for creating a conversion table based on said first image data and said color data of said reference print and showing a relationship between said first image data and said color data;

25 a reference color data converting step for converting data of predetermined measurement positions of second image data for recording a desired image on the printing plates for use in printing, into reference color data by using said conversion table;

a print preparing step for making a second printing plate by recording an image thereon based on said second image data, and printing a print with said second printing plate;

5 a print color density measuring step for obtaining print color data of positions corresponding to said measurement positions by reading said print prepared in said print preparing step; and

 an ink feeding rate adjusting step for adjusting the
10 ink feeding rates of said printing machine based on a result of comparison between said reference color data obtained in said reference color data converting step and said print color data.

15 2. An ink feeding rate control method as defined in claim 1, wherein said reference chart includes a plurality of color patches with successively varying dot percentages for each of YMCK colors.

20 3. An ink feeding rate control method as defined in claim 2, wherein said measurement positions are positions having a representative color characterizing the image of the print.

 4. An ink feeding rate control method as defined in claim 3,
25 wherein said representative color and the positions thereof

are determined for respective sections corresponding to ink keys in each ink well of the printing machine.

5. An ink feeding rate control method as defined in claim 4,
5 wherein said image data has three color components, said representative color being determined by classifying pixels in each of sections corresponding to said ink keys according to tones of each of the three color components, and determining said representative color and a position thereof
10 from pixels included in a predetermined class interval.

6. An ink feeding rate control method as defined in claim 5, wherein a histogram with the tones of each of the three color components of each pixel in each of said sections is created,
15 and said representative color and the position thereof are selected from pixels included in a class interval of maximum frequency in said histogram.

7. An ink feeding rate control method as defined in claim 1,
20 wherein said reference chart includes color patches having dot percentages for printing a color corresponding to a particular color to be reproduced faithfully.

8. An ink feeding rate control method as defined in claim 7,
25 wherein said measurement positions are positions having a

representative color characterizing the image of the print.

9. An ink feeding rate control method as defined in claim 8,
wherein said representative color and the positions thereof
5 are determined for respective sections corresponding to ink
keys in each ink well of the printing machine.

10. An ink feeding rate control method as defined in claim
9, wherein said image data has three color components, said
10 representative color being determined by classifying pixels
in each of sections corresponding to said ink keys according
to tones of each of the three color components, and
determining said representative color and a position thereof
from pixels included in a predetermined class interval.

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11. An ink feeding rate control method as defined in claim
10, wherein a histogram with the tones of each of the three
color components of each pixel in each of said sections is
created, and said representative color and the position
20 thereof are selected from pixels included in a class interval
of maximum frequency in said histogram.

12. An ink feeding rate control method as defined in claim
1, wherein said measurement positions are positions having
25 a representative color characterizing the image of the print.

13. An ink feeding rate control method as defined in claim
12, wherein said representative color and the positions
thereof are determined for respective sections corresponding
5 to ink keys in each ink well of the printing machine.

14. An ink feeding rate control method as defined in claim
13, wherein said image data has three color components,
said representative color being determined by classifying
10 pixels in each of sections corresponding to said ink keys
according to tones of each of the three color components, and
determining said representative color and a position thereof
from pixels included in a predetermined class interval.

15. An ink feeding rate control method as defined in claim
14, wherein a histogram with the tones of each of the three
color components of each pixel in each of said sections is
created, and said representative color and the position
thereof are selected from pixels included in a class interval
20 of maximum frequency in said histogram.

16. An ink feeding rate control apparatus for adjusting ink
feeding rates of a printing machine when performing a
printing operation using printing plates with an image
25 recorded thereon based on printing data, said apparatus

comprising:

image pickup means for reading a reference print
printed with a first printing plate made by recording an
image thereon based on first image data for recording a
5 reference chart including a plurality of color patches set
beforehand, and a print with a second printing plate made
by recording an image thereon based on second image data
for recording a desired image on the printing plates for use
in printing;

10 an image memory for storing color data of said refer-
ence print obtained by reading said reference print with said
image pickup means, and print color data of positions corre-
sponding to predetermined measurement positions by read-
ing, with said image pickup means, said print printed with
15 second printing plate;

conversion table creating means for creating a
conversion table based on said first image data and said
color data of said reference print stored in said image
memory and showing a relationship between said first
20 image data and said color data;

reference color data converting means for converting
data of said measurement positions of said second image
data into reference color data by using said conversion table;
and

25 comparing means for comparing said reference color

data provided by said reference color data converting means and said print color data stored in said image memory, to determine whether said print has a proper color tone.

- 5 17. An ink feeding rate control apparatus as defined in claim 16, wherein said reference chart includes a plurality of color patches with successively varying dot percentages for each of YMCK colors.
- 10 18. An ink feeding rate control apparatus as defined in claim 16, wherein said reference chart includes color patches having dot percentages for printing a color corresponding to a particular color to be reproduced faithfully.
- 15 19. An ink feeding rate control apparatus as defined in claim 16, wherein said measurement positions are positions having a representative color characterizing the image of the print.
- 20 20. An ink feeding rate control apparatus as defined in claim 19, wherein said representative color and the positions thereof are determined for respective sections corresponding to ink keys in each ink well of the printing machine.
- 25 21. An ink feeding rate control apparatus as defined in

claim 20, wherein said image data has three color components, said representative color being determined by classifying pixels in each of sections corresponding to said ink keys according to tones of each of the three color
5 components, and determining said representative color and a position thereof from pixels included in a predetermined class interval.